L4 and L5 Rf Conditiong Guide

1. Verify L4 and L5 "RF Gate Start" at -4.2 μs and the "RF Gate width" is at 4.5 μs.
2. Set PFN voltage to 30kV, increase klystron output (forward) power by 0.2 to 0.3 ***MW*** steps every 10 minutes by adding drive power.
3. After klystron saturation is reached (meaning adding drive power will not affect klystron output power level any more), or drive power level is close to 200W, lower drive power to about 150W and start increasing PFN voltage adding 0.1kV steps every 10 minutes.
4. Continuously monitor L4/L5 vacuum strip charts; if more than two vacuum spikes are present within the window and/or vacuum spikes reach 1e-6 range, vacuum is active, STOP Conditioning (the system is outgassing), resuming conditioning when 1e-7 vacuum is restored.
5. In case of a vacuum or VSWR trip,
    a. Lower PFN voltage by 3kV
    b. Wait 5 minutes and check vacuum levels
    c. If vacuum levels are above 1e-7; Go to step 5b
    d. If vacuum levels are below 1e-7; Reset the trip
    e. Ramp the PFN voltage to pre-trip level over a period of 5 minutes
6. In case of "Arc detector" trip,
    a. Lower PFN voltage by 5kV
    b. Wait 5 minutes and check vacuum levels
    c. If vacuum levels are above 1e-7; Go to step 6b
    d. If vacuum levels are below 1e-7; Reset the trip
    e. Ramp the PFN voltage to pre-trip level over a period of 5 minutes
7. If case of a second "Arc detector" trip while ramping or within 8 Hrs of the previous Arc detector trip,
    a. STOP
    b. Reset trip as directed in step 6 above but DO NOT return the PFN voltage to pre-trip level.
    c. Return the sector to normal operating pfn value of 28kV with a SLED forward power of ~65MW.
8. Log all trips and abnormal behavior in the Logbook.
9. Contact the EIC in the event of any additional rf conditioning questions or unusual events. Contact the Linac CO for any operational linac questions.